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| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/929,274 | TRAN ET AL. | |
| | Examiner | Art Unit | |
| | Wes Tucker | 2623 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to election filed April 6th, 2005.
2. ☒ The allowed claim(s) is/are 1-10 and 30-35.
3. ☒ The drawings filed on 12 April 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date <u>2-11-02</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-10 and 30-35 in the reply filed on April 6th, 2005 is acknowledged.

This application is in condition for allowance except for the presence of claims 11-29 and 36-43, which were non-elected without traverse in the response by Applicant filed April 6th, 2005. Accordingly, claims 11-29 and 36-43 have been cancelled.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel J. Bourque Reg. No. 35,457 on June 16, 2005.

The application has been amended as follows:

In line 4 of claim 30 replace the term "lanes" with "lane".

In line 6 of claim 30 replace the term "lanes" with "lane".

In line 3 of claim 31 replace the term "lanes" with "lane".

Cancel Claims 11-29 and 36-43.

Allowable Subject Matter

Claims 1-10 and 30-35 are allowed.

The following is an examiner's statement of reasons for allowance:

With regard to independent claims 1 and 30, the reference of U.S. Patent 5,165,520 to Herve et al. discloses a method of determining overcrowding of packages or workpieces by using image processing to examine certain thresholds which are in turn used to indicate operating conditions relevant to the control of the delivery of workpieces. However the deficiency of Herve with regard to the present claimed invention is the use of a reference image of a position prior to the delivery of a workpiece for use in comparison to an image during delivery of a workpiece. Many found prior art references are able to determine the presence of delivered workpieces or objects using image processing techniques and further determining thresholds or conditions relevant to the control of delivery of the workpieces. However none of the found prior art found teaches or fairly suggests the feature "storing a digital reference image of the position prior to the delivery of the workpieces" and using that stored image in performing arithmetic image processing with an image stored during the delivery of the workpieces. It is noted that much of the cited prior art uses sensors and image processing techniques to indicate the presence of objects being delivered but they do so without the use of a stored digital reference image of the position prior to the delivery of workpieces. The same discussion applies to independent claim 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art

Below is a listing of patents found by the Examiner to be relevant to the claimed invention and in similar environment such as package sorting and inspection using images, sensors and cameras.

U.S. Patent 4,818,380 to Arzegami et al.

U.S. Patent 6,464,065 to Herubel et al.

U.S. Patent 5,638,938 to Lazzarotti et al.

U.S. Patent 6,847,860 to Mills et al.

U.S. Patent 6,662,929 to Neary et al.

U.S. Patent 6,629,018 to Mondie et al.

U.S. Patent 6,471,044 to Isaacs et al.

U.S. Patent 5,141,097 to Oiry et al.

U.S. Patent 3,822,009 to Richards

U.S. Patent 5,562,195 to Isaacs

Art Unit: 2623

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker

6-15-05


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